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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/380,563	09/03/1999	MAKOTO SHOZAKAI	04208.0077	2773

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1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER

ARMSTRONG, ANGELA A

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 08/06/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/380,563

Applicant(s)

SHOZAKAI ET AL.

Examiner

Angela A. Armstrong

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 13 April 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

RICHMOND DORVIL
SUPERVISORY PATENT EXAMINER

Continuation of 2. NOTE: the proposed claim limitations to claim 4, changes the scope of the claims, requiring further consideration and/or search..

Response to Arguments

Applicant's arguments filed April 13, 2004 have been fully considered but they are not persuasive.

Applicant argues the combination of Furukawa et al and applicant's admitted prior art do not teach or suggest the claim limitations of claim 1. The Examiner disagrees and argues Furukawa teaches an echo canceller with Normalized Least Mean Squares algorithm, which provides support for the storage and control means. Applicant's admitted prior art of page 20, lines 16-24 and page 21, line 25 to page 23, line 3, provide support for the decision means for checking in each frame whether or not a voice is included in the speech signal.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one of ordinary skill would recognize the advantages of modifying the system of Furukawa et al, to implement checking, in each frame, whether or not voice is included in an input signal, by using time domain and frequency domain information, for the purpose of improving signal quality in a noisy environment, as suggested by Suvanen (WO 96/42142).

Applicant argues Furukawa discloses performing all the functions for every sample and teaches away from the claimed decision means, storage means, and control means, which

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perform the recited functions in each frame. In response, the Examiner argues, Applicant's admitted prior art of page 20, lines 16-24 and page 21, line 25 to page 23, line 3, provide support for the decision means for checking in each frame whether or not a voice is included in the speech signal. Additionally, since the admitted prior art provides for the implementation of the decision step in each frame, the Examiner argues further modifying the system to implement the storage and control functions in each frame is obvious to one of ordinary skill in the art.

In response to applicant's request for reference citation to support that "it is well known in the art to provide for estimates of non speech (or noise) in the implementation of a subtraction scheme for noise suppression", applicant is referred to Sharma et al (6,539,352), Eatwell (US Patent No. 5,742,694), Raman (US Patent No. 6,001,131), or Arslan et al (US Patent No. 6,263,307).

In response to applicant's request for a reference citation to support that "it is well known in the art of speech and signal processing to perform a Fourier transform on the logarithm of a spectrum to obtain a cepstrum", applicant is referred to O'Shaughnessy, pages 229-231 or Parsons, page 203-205.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 703-308-6258. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Angela A. Armstrong
Examiner
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AAA
July 23, 2004